

Arkwood, Inc., Superfund Site
Comments on Revised (August 29, 2014) Conceptual Site Model and Tracing Study Work Plan

Item No.	Reference	Comments by EPA Dated: October 6, 2014	PRP Response Dated _____
1.	April 2014 CSM page 1 ICS User Guide Page 29 Item 11 April 2014 CSM page 5 Decision Unit No. 2 July 2014 CSM Comment 3 July 2014 CSM Comment 10	EPA does not agree with the responses to July 2014 Comments 3 and 10 regarding interpretation of data to be obtained through sampling. However, the CSM and sampling design appears to be generally adequate (see minor QAPP issues listed below), so there appears to be no reason to postpone sample collection. Further discussion about sample results and data evaluation can occur after analytical results are received.	
2.	August 2014 CSM Work Plan for Sampling and Analysis\ Section 3.2.1 July 2014 CSM Comment 10	The plan triplicate sampling is planned for one of the 5 Sampling Units of Decision Unit No. 2. In response to EPA's July 2014 Comment No. 10 on the CSM, McKesson agreed there will now be 8 Sampling Units. The statement in Section 3.2.1 of the plan should be corrected.	
3.	August 2014 CSM QAPP General	Please provide a Table of Contents and full page numbering. Also, it would be beneficial to have an organization chart to show lines and directions of communications between individuals discussed in the first section.	

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4.	August 2014 CSM QAPP Page 2	<p>The description of James Fleer, QAM, refers to the “project manager,” which is a title not mentioned elsewhere in the document. Should it refer to the “project coordinator,” Jean Mescher?</p> <p>The text about James Fleer indicates that the QAM will be validating the field data. Who will be validating the laboratory data? The dioxin data should be validated.</p>	
5.	August 2014 CSM QAPP Page 3	Reference to following ITRC ISM guidance is acceptable, but it would be worthwhile to also include a reference to EPA dioxin QAPP guidance which supports the use of ISM (EPA 2011, UFP QAPP for assessment of dioxin soil sites); also the second citation was provided in the FSP.	
6.	August 2014 CSM QAPP Page 3 Precision	Please show the equation that will be used to determine the RPD.	
7.	August 2014 CSM QAPP Page 4 Accuracy	Please show the equation that will be used to calculate percent recovery.	
8.	August 2014 CSM QAPP Page 4 Completeness	A 100% goal for the taking of samples is good, but what if the laboratory data are rejected, and even though the samples were taken some (or all) of selected congener data are rejected? We suggest establishing a second completeness goal (at less than 100%) for data suitable for use in risk assessment. Note the earlier comment about validation of all laboratory data.	

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9.	August 2014 CSM QAPP Page 4 Specialized Training	The statement “Specific certifications have not been identified as necessary during the planning of this project,” can be interpreted in different ways. It could be interpreted as a contradiction to the earlier statement that members of the field team must have valid specialized training in accordance with OSHA regulations. Perhaps it would be more appropriate to say, “Specific certifications have not been identified as necessary for those participating in the planning of this project.”	
10.	August 2014 CSM QAPP Page 4 Documents and Records	At the end of the first paragraph please add, “Any errors will be crossed through with a single line, dated, and initialed.”	
11.	August 2014 CSM QAPP Page 6 Analytical Method Requirements	EPA Method 1613 is silent on sample preparation although it contains the details of laboratory analysis, particularly with respect to ISM samples. Please add a section (or discussion) about ISM sample preparation. How will the samples be dried, disaggregated, and sieved? How will the random aliquots be taken for extraction by the laboratory? It may be useful to cite ITRC guidance for this.	

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12.	August 2014 CSM QAPP Page 7 Instrument/Equipment Testing Instrument Calibration Frequency August 2014 CSM QAPP Page 3 Second paragraph	Several times, the text mentions sampling to a depth of 2 inches, which is not correct. On page 3, the text says samples will be collected from the top 6 inches of soil, which is correct. Please review and correct for consistency.	
13.	Anticipated Future Use of Adjacent Property July 2014 CSM Comment 17	In July 2014, EPA Comment No. 17 on the Revised Conceptual Site Model said this: <i>Future use of the adjacent property will require protection of the ditch that runs along the boundary between the 12 adjacent acres and the site mown area. This ditch protects the capped areas by providing drainage of storm water runoff.</i> McKesson's response to comments dated August 28, 2014, omitted Comment No. 17. Please respond to the comment.	
14.	August 2014 Tracing Study Work Plan Page 2 3 rd Paragraph July 2014 Tracer Comment No. 5	In response to July 2014 Tracer Comment No. 5, McKesson indicated the original trace injection point would be shown on a map attached to the August 2014 Tracing Study Work Plan. Please provide that map and refer to it in the plan.	

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15.	August 2014 Tracing Study Work Plan Page 2 5 th Paragraph July 2014 Tracer Comment No. 6	The information requested in July 2014 Tracer Comment No. 6 and provided in McKesson's response should be added to the August 2014 Tracing Study Work Plan.	
16.	August 2014 Tracing Study Work Plan Page 3 4 th Paragraph Page 5 2 nd Paragraph July 2014 Tracer Comment No. 10 July 2014 Tracer Comment No. 17	In response to July 2014 Tracer Comment No. 10 and Comment No. 17, McKesson provided a copy of Ozark Underground Laboratory's <i>Procedures and Criteria for Analysis of Fluorescent Dyes in Water and Charcoal Samplers</i> . Please attach that document to the Tracing Study Work Plan and refer to it in the text of the plan.	
17.	August 2014 Tracing Study Work Plan Page 3 4 th Paragraph July 2014 Tracer Comment No. 11	Please add to the work plan the description of the wells provided in McKesson's response to July 2014 Tracer Comment No. 11.	
18.	August 2014 Tracing Study Work Plan Page 5 4 th Paragraph July 2014 Tracer Comment No. 18	Please add to the work plan a statement that grab samples will be collected from the injection wells. McKesson agreed to this in response to July 2014 Tracer Comment No. 18, but the August 2014 Tracing Study Work Plan does not mention it.	

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19.	August 2014 Tracing Study Work Plan Page 5 July 2014 Tracer Comment No. 19	In response to July 2014 Tracer Comment No. 19, McKesson briefly discussed possible results of this Tracing Study, including likely recovery rates. Please include this in the Tracing Study Work Plan.	